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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kaplan et al.

Art Unit : 2176

Serial No. : 09/594,054

Examiner : Quoc A. Tran

Filed : June 14, 2000

Title : ENVIRONMENT-BASED BOOKMARK MEDIA

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

BRIEF ON APPEAL**(1) Real Party in Interest**

The real party in interest is Adobe Systems Incorporated.

**(2) Related Appeals and Interferences**

None

**(3) Status of Claims**

Claims 1-3, 5, 7-11, 13-17, 19-24, 27-31, 33-43, and 45-46 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,314,423 B1 to Himmel et al. ("Himmel") in view of U.S. Patent No. 6,496,829 B1 to Nakamura ("Nakamura") and further in view of U.S. Patent No. 6,389,541 to Patterson ("Patterson").

Claims 4, 12, and 25 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Himmel in view of Nakamura and Patterson, and further in view of U.S. Patent No. 6,175,842 B1 to Kirk et al. ("Kirk").

Claims 6, 18, 26, 32, and 44 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Himmel in view of Nakamura and Patterson, and further in view of U.S. Patent No. 6,269,403 B1 to Anders ("Anders").

**(4) Status of Amendments**

11/09/2004 AWONDAF1 00000103 09594054

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There are no unentered amendments

**(5) Summary of Invention**

A network environment includes one or more destinations, for example, Web pages and chat rooms. Destinations can be external to and accessible by a client computer ("a client").  
(See Specification, page 3, line 25 to page 4, line 1.)

A client can store one or more references that point to external destinations in the network environment. Each external destination can be associated with, and store a bookmark media object that provides information regarding a state of the destination. That is, a bookmark media object associated with a destination provides information regarding the content of the destination. (See Specification, page 2, lines 1-11 and page 6, lines 1-2.)

A bookmark media object provides a dynamic representation of a destination. For example, a bookmark media object can include a thumbnail, a video stream, an audio stream, and other form of media that provides a preview of the destination. Such representations can provide a preview of the state of the destination associated with the bookmark media object. (See Specification, page 3, line 30 to page 4, lines 12.)

A bookmark media object can be generated for each network destination. A bookmark media object can be updated to reflect a current state of a destination. After generation, a bookmark media objects can be stored on one or more servers within a computing environment. A bookmark media object can be updated as a function of environmental-determined conditions, for example, current loading conditions of the environment and changes in content provided by the environment. Additionally, a bookmark media object can be updated by using information received from client computers. Such information can include, for example, user identification, cached information, and general computing conditions. (See Specification, page 4, lines 23-27, page 5, lines 26-27, and page 6, lines 1-10.)

Bookmark media objects are presented to the client for selection by a user. As indicated above, the bookmark media objects can provide previews of their destinations. Selection of a bookmark media object causes the client to access the destination associated with the selected bookmark media object. (See Specification, page 2, lines 1-11 and page 6, lines 1-2.)

A system including a server within an online environment can store a set of bookmark media objects. A client device is communicatively coupled to the server and is configured to store references to the network destinations and references to the corresponding bookmark media objects located in the online environment. A web browser executing in an operating environment provided by the client device can be configured to present the bookmark media objects to a user for selection as a function of the references and to access the network destination corresponding to the selected bookmark media object. (*See* Specification, page 2, lines 12-22 and page 5, lines 1-11.)

**(6) Issues**

1. Are claims 1-3, 5, 7-11, 13-17, 19-24, 27-31, 33-43, and 45-46 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Himmel in view of Nakamura and Patterson?
2. Are claims 4, 12, and 25 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Himmel in view of Nakamura and Patterson, and further in view of Kirk?
3. Are claims 6, 18, 26, 32, and 44 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Himmel in view of Nakamura and Patterson, and further in view of Anders?

**(7) Grouping of Claims**

For the purposes of this appeal, the claims are grouped as follows:

1. For the purpose of Issue 1:
  - a. Claims 1-3, 5, 7-11, 22-24, 26-31, and 33-39 stand together.
    - i. Claims 8, 27, and 34 are separately patentable from claims listed in (a) above.
  - b. Claims 13-17, 19-21, 40-43, and 45-46 stand together.
    - i. Claims 17 and 43 are separately patentable from claims listed in (b) above.
    - ii. Claims 19 and 45 are separately patentable from claims listed in (b) above.
2. For the purpose of Issue 2, claims 4, 12, and 25 stand and fall together.
3. For the purpose of Issue 3, claims 6, 18, 32, and 44 stand and fall together.

**(8) Argument**

**1. Are claims 1-3, 5, 7-11, 13-17, 19-24, 27-31, 33-43, and 45-46 properly rejected under 35 U.S.C. § 103(a) as unpatentable over Himmel in view of Nakamura and Patterson?**

**Group (a): Claims 1-3, 5, 7-11, 22-24, 26-31, and 33-39**

Claim 1 stands finally rejected as being unpatentable over Himmel in view of Nakamura and Patterson. Claim 1 recites:

A method comprising:

storing on a client device a set of references to destinations in an external network environment, each destination having an associated bookmark media object located in the external network environment, the associated bookmark media object when presented to a user providing information regarding a state of the destination;

presenting the bookmark media objects to a user for selection; and

accessing the network destination corresponding to the selected bookmark media object.

The applicant respectfully submits that the rejection is improper because the art cited by the Examiner fails to disclose or suggest elements of claim 1. For example, claim 1 requires a presenting step. As can be seen, the presenting step of claim 1 requires that bookmark media objects be presented to a user for selection. The bookmark media object, when presented to a user, provides information regarding a state of the destination associated with the bookmark media object. As will be established below, the cited art, either alone or in combination, fails to disclose or suggest the presenting step of claim 1.

The Examiner contends that Himmel, at col. 3, lines 7-11, discloses the applicant's presenting step. The applicant respectfully disagrees because Himmel's bookmarks provide only URL references and a static text description of the respective destinations, neither of which

provide state information about the destinations, as required by claim 1. *See* Himmel col. 5, lines 20-30. The cited portion of Himmel provides:

Responsive to a request for downloading a selected bookmark set, the selected bookmark is served to the client. The selected bookmark set is received and used by the client browser to access the set of URLs in the selected bookmark set.

The cited portion states that a client receives a set of bookmarks. Upon selection of a bookmark from the received set, the client browser accesses the URL referenced in the selected bookmark. However, the bookmarks described by Himmel are not the same as and, thus, do not disclose or suggest, the applicant's claimed bookmark media objects. In particular, Himmel's bookmarks are simply URLs and, as such, do not provide information regarding a state of a destination, as does the applicant's claimed bookmark media objects. Himmel's URLs provide only a network address when the bookmarks are presented to the user, which, without more, only points to a destination and does not provide any state information about the destination. In fact, Himmel's URLs do not even inform a user if the destination exists at the referenced location. For example, the URLs can point to Websites that no longer exists.

In contrast, the claimed bookmark media objects, as discussed above, provide information regarding a state of the destination. For example, a bookmark media object can be a thumbnail preview of the current content of a destination, which provides a representation of a state of the destination. (*See* Specification, page 4, lines 5-12.) The user, when presented with each bookmark media object, receives state information for each destination prior to selection. Thus, the cited portion of Himmel fails to disclose or suggest the applicant's presenting step. Indeed, Himmel as a whole fails to disclose or suggest a bookmark media object that, when presented to a user, provides information regarding a state of the destination. For at least the above reasons, claim 1 is improperly rejected.

The Examiner contends that Nakamura, at col. 15, lines 35-37, discloses the claimed presenting step. The applicant disagrees for the reasons set forth below. First, the cited portion of Nakamura teaches only that "programs, are supplied from a storage medium, such as a CD-ROM, a flash memory or an FD, or an external storage medium via a network." As can be seen, the cited portion describes only the various forms of storage media such as a CD-ROM and flash

memory. There is no mention that the storage media can include a bookmark media object located in the external network environment that provides information regarding a state of the destination, as recited by claim 1. The applicant respectfully submits that, without more, a description of storage media does not disclose or suggest a bookmark media object that provides information regarding a state of a destination. Moreover, Nakamura does not disclose or suggest that the storage media are presented to a user for selection, as recited by claim 1. For at least these reasons, claim 1 is improperly rejected.

The Examiner contends that Patterson discloses the applicant's claimed bookmark media objects. The portion of Patterson on which the Examiner relies reads:

Objects embodying such digital data or content may be referred to as media objects, and media objects which are exchanged or delivered in electronic commerce may be referred to as commerce media objects.

The cited portion describes multimedia content that can be purchased and delivered electronically over a network. This content includes, for example, an online magazine rack where a user can purchase a magazine and have the content delivered. (*See* Patterson, col. 8, lines 36-41.) The Examiner suggests that Patterson's media objects disclose the applicant's bookmark media objects. The applicant respectfully disagrees. Claim 1 requires that each destination, of a set of references stored on a client device, has an associated bookmark media object not stored on the client device that, when presented to a user, provides information regarding a state of the destination. That is, the applicant's bookmark media objects are associated with destinations of references stored on a client device. Patterson fails to teach or suggest such a concept, that is, associating external bookmark media objects with corresponding destinations of a set of references stored on a client device. Patterson, thus, does not disclose or suggest the claimed bookmark media objects. For at least this reason, claim 1 is improperly rejected.

Moreover, Patterson does not disclose or suggest presenting the media objects to a user for selection, as required by claim 1. Specifically, although Patterson describes selecting a desired object (col. 8, line 36-39), Patterson does not describe the information presented to the user for making such a selection. There is simply no disclosure or suggestion in Patterson that

the media objects themselves are presented for selection. Indeed, Patterson suggests otherwise. Patterson discloses that the multimedia content can be compressed, encrypted, and packaged in media objects that are delivered to and stored a client computer. Once payment has been made, the media objects are decrypted and uncompressed, and at which point can be accessible. The multimedia content is thus accessible only to users who have paid. (*See Patterson*, at col. 8, lines 7-19.) The user, for example, can capture content when the media objects are presented for selection and not pay for them afterwards. In view of Patterson's teachings of not allowing access to content of media objects until the media objects have been stored on the client computer and the content paid for, the applicant respectfully submits that one of ordinary skill in the art would be lead away from presenting such media objects to a user for selection. Patterson, thus, teaches away from the presenting step of claim 1. For at least this reason, claim 1 is improperly rejected.

The remaining claims in Group (a) either incorporate the above discussed features of claim 1 or include similar features and, thus, are also improperly rejected for the same or similar reasons set forth above with respect to claim 1.

**Sub-Group (a)(i): Claims 8, 27, and 34**

Claim 8 stands finally rejected as being unpatentable over Himmel in view of Nakamura. Claim 8 is patentable for at least the same reasons as claim 1. Claim 8 is also separately patentable from the balance of the claims in Group (a) because claim 8 recites the additional feature of displaying a stream of video to present a bookmark media object. This feature has the advantage, for example, of providing the user with a video stream representing the state of the destination to aid in the user's selection of a bookmark media object. (Specification, page 4, lines 5-12.)

Claim 8 incorporates features discussed above with respect to claim 1 and the arguments made for claim 1 apply with equal force to claim 8. For at least this reason, claim 8 is improperly rejected.

Moreover, the art cited by the Examiner fails to disclose or suggest that "presenting the bookmark media objects comprises displaying a stream of video," as recited by claim 8. The Examiner states that Himmel, at col. 1, lines 30-40, discloses presenting a bookmark media

object as a video stream. The applicant respectfully disagrees because, as discussed above, Himmel does not disclose or suggest the applicant's claimed bookmark media objects.

Moreover, Himmel fails to teach or suggest presenting a bookmark media object to the user as a video stream. The portion of Himmel on which the Examiner relies provides, in pertinent part, that:

Client machines accomplish transactions to Web servers using the Hypertext Transfer Protocol (HTTP), which is a known application protocol providing users access to files, e.g., text, graphics, images, sound, video, using a standard page description language known as the Hypertext Markup Language (HTML).

As can be seen, the cited portion of Himmel discloses that the World Wide Web can be used to transfer multimedia files across a network using HTTP. However, nothing in this portion discloses or suggests that Himmel's bookmarks are displayed as streaming video. For at least this reason, claim 8 is improperly rejected.

Claims 27 and 34 each includes a feature similar to the one discussed with respect to claim 8, and the arguments made for claim 8 apply with equal force to claims 27 and 34. For at least this reason, claims 27 and 34 are improperly rejected.

**Group (b): Claims 13-17, 19-21, 40-43, and 45-46**

Claim 13 stands finally rejected as being unpatentable over Himmel. Claim 13 recites:

A method comprising:  
generating a set of bookmark media objects, each bookmark media object corresponding to a network destination within a computing environment;  
storing the bookmark media objects on one or more servers within the computing environment; and  
updating each bookmark media object as a function of a state of the corresponding network destination.

The applicant respectfully submits that claim 13 is improperly rejected because the art cited by the Examiner fails to disclose or suggest elements of claim 13. For example, claim 13 requires an updating step. As can be seen, the updating step of claim 13 requires that bookmark

media objects be updated as a function of a state of a corresponding network destination. The applicant respectfully submits that the cited art fails to disclose or suggest the updating step of claim 13.

The Examiner contends that Himmel describes the required feature of updating the bookmark media objects at col. 2, lines 27-29. The applicant respectfully disagrees because, as discussed above, Himmel's bookmarks include only URLs and do not disclose or suggest the applicant's claimed bookmark media objects. As Himmel does not disclose or suggest the claimed bookmark media objects, Himmel cannot disclose or suggest updating such objects. For at least this reason, claim 13 is improperly rejected.

Moreover, Himmel's bookmarks are not updated as a function of a state of the corresponding network destination, as required by claim 13. The portion of Himmel on which the Examiner relies reads:

[T]he current technology used in browsers to update bookmarks, i.e. removing the old address and entering the new one, is very slow and inefficient.

As can be seen, Himmel states that current browser systems update bookmarks by removing old addresses and entering new addresses. There is nothing in this portion, or in the rest of Himmel, that discloses or suggests updating a bookmark media object as a function of a state of the network destination, as required by claim 13. For at least this reason, claim 13 is improperly rejected.

The balance of the claims in Group (b) incorporate at least the features of generating a set of bookmark media objects and updating each bookmark media object as a function of a state of the corresponding network destination. Therefore, the rejection of the remaining claims of Group (b) is improper for the same reasons set forth above with respect to claim 13.

#### **Sub-Group (b)(i): Claims 17 and 43**

Claim 17 stands finally rejected as being unpatentable over Himmel. Claim 17 is patentable for the same reasons as claim 13. Claim 17 is also separately patentable from the balance of the claims in Group (b) because claim 17 recites the additional feature of updating each bookmark media object when content of the corresponding network destination is changed.

Such updating has the advantage of providing a user with a multimedia preview a destination that is updated to reflect the current content of the destination. (Specification, page 6, lines 1-10.)

Claim 17 incorporates features discussed above with respect to claim 13, and the arguments made for claim 13 apply with equal force to claim 17. For at least this reason, claim 17 is improperly rejected.

Moreover, the art cited by the Examiner fails to disclose or suggest "updating each bookmark media object comprises updating each bookmark media object when content of the corresponding network destination is changed," as required by claim 17.

The Examiner contends that Himmel, at col. 11, lines 20-25, discloses updating bookmark media objects when destination content changes. The applicant respectfully disagrees. The portion of Himmel on which the Examiner relies reads:

This allows the user to periodically update the information in his browser. A bookmark list which is updated monthly can have a different set of "advertisers", i.e. bookmarks to paying web sites. Presuming that the content, the list of URLs, is kept valuable and current, users will subscribe.

As can be seen, Himmel describes updating a bookmark list based on a set subscription period. There is nothing in Himmel that discloses or suggests that such updates are based on changes in destination content. For at least the above reasons, the rejection of claim 17 is improper.

Claim 43 includes a feature similar to the one discussed with respect to claim 17 and the foregoing arguments made for claim 17 apply with equal force to claim 43. Thus, claims 17 and 43 are also improperly rejected.

**Sub-Group (b)(ii): Claims 19 and 45**

Claim 19 stands finally rejected as unpatentable over Himmel. Claim 19 is patentable for the same reasons as claim 13. Claim 19 is also separately patentable from the balance of the claims in Group (b), as it recites the additional feature of generating a video stream for a first bookmark media object in the set. This has the advantage of providing the user with a bookmark media object including a video stream preview of a destination. (Specification, page 4, lines 5-12.)

The applicant respectfully submits that claim 19 is improperly rejected because the art cited by the Examiner fails to disclose or suggest that “generating the set of bookmark media objects includes generating a video stream for a first bookmark media object in the set,” as recited by claim 19. As can be seen, claim 19 requires generating a video stream for a first bookmark media object in a set of bookmark media objects. As discussed above, Himmel fails to disclose or suggest the claimed bookmark media objects. As Himmel does not disclose or suggest the claimed bookmark media objects, Himmel cannot disclose or suggest generating a video stream for such a bookmark media object. For at least this reason, claim 19 is improperly rejected.

Moreover, Himmel fails to teach or suggest claim 19 because there is simply nothing in Himmel to teach or suggest generating a video stream for one of Himmel's bookmarks. For at least this reason, claim 19 is improperly rejected.

Claim 45 includes a feature similar to the one discussed with respect to claim 19, and the foregoing arguments made for claim 19 apply with equal force to claim 45. For at least this reasons, claim 45 is improperly rejected.

**2. Are claims 4, 12, and 25 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Himmel in view of Nakamura and Patterson, and further in view of Kirk?**

Claims 4 and 12 depend from claim 1 and are improperly rejected for at least the same reasons why claim 1 is improperly rejected. Claim 25 depends from claim 22 and is improperly rejected for at least the same reasons why claim 22 is improperly rejected. Moreover, Kirk fails

to teach or suggest a bookmark media object that, when presented to a user, provides information regarding a state of the destination.

**3. Are claims 6, 18, 26, 32, and 44 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Himmel in view of Nakamura and Patterson, and further in view of Anders?**

Claims 6, 18, 26, 32, and 44 depend from one of claims 1, 13, 22, 31, and 40, and are improperly rejected for at least the same reasons why claims 1, 13, 22, 31, and 40 are improperly rejected. Moreover, Anders fails to teach or suggest a bookmark media object that, when presented to a user, provides information regarding a state of the destination

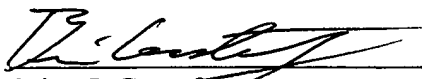
**(9) Appendix**

Appendix A to this brief is a set of the claims currently pending in this case.

Enclosed is a \$340.00 check for the Appeal Brief fee and a check for \$430 for the 2-Month Petition for Extension of Time fee. Please apply any other appropriate charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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## **Appendix of Claims**

### **Pending Claims for 09/594,054**

1. A method comprising:  
storing on a client device a set of references to destinations in an external network environment, each destination having an associated bookmark media object located in the external network environment, the associated bookmark media object when presented to a user providing information regarding a state of the destination;  
presenting the bookmark media objects to a user for selection; and  
accessing the network destination corresponding to the selected bookmark media object.
2. The method of claim 1 further comprising storing on the client device a set of references to the bookmark media objects.
3. The method of claim 1, wherein accessing the network destination comprises retrieving a web page corresponding to the selected bookmark media object.
4. The method of claim 1, wherein accessing the network destination comprises retrieving a three-dimensional environment corresponding to the selected bookmark media object.
5. The method of claim 1, wherein presenting the bookmark media objects comprises retrieving the bookmark media objects from one or more hosts.
6. The method of claim 1 wherein presenting the bookmark media objects comprises displaying at least one thumbnail.
7. The method of claim 1, wherein presenting the bookmark media objects comprises displaying a matrix of bookmark media objects.
8. The method of claim 1 wherein presenting the bookmark media object comprises displaying a stream of video.
9. The method of claim 1 wherein displaying the bookmark media objects comprises outputting audible sounds.

10. The method of claim 1 and further including:  
determining a status of each bookmark media object; and  
presenting a default bookmark media object when the status indicates the corresponding bookmark media object is not available.
11. The method of claim 1, wherein each bookmark media object represents a current state of the corresponding network destination.
12. The method of claim 1, wherein each bookmark media object represents an entry point into three-dimensional content defined by the web pages.
13. A method comprising:  
generating a set of bookmark media objects, each bookmark media object corresponding to a network destination within a computing environment;  
storing the bookmark media objects on one or more servers within the computing environment; and  
updating each bookmark media object as a function of a state of the corresponding network destination.
14. The method of claim 13, wherein updating each bookmark media object comprises updating each bookmark media object as a function of a current state of the corresponding network destination.
15. The method of claim 13, wherein updating each bookmark media object comprises updating each bookmark media object as a function of the information received from a remote user.
16. The method of claim 13, wherein the set of bookmark media objects is generated by a server within the computing environment, and further wherein updating each bookmark media object comprises updating each bookmark media object as a function of host-determined conditions.

17. The method of claim 13, wherein updating each bookmark media object comprises updating each bookmark media object when content of the corresponding network destination is changed.
18. The method of claim 13, wherein generating the set of bookmark media objects includes generating a thumbnail for a first bookmark media object in the set.
19. The method of claim 13, wherein generating the set of bookmark media objects includes generating a video stream for a first bookmark media object in the set.
20. The method of claim 13, wherein generating the set of bookmark media objects includes generating an audio stream for a first bookmark media object in the set.
21. The method of claim 13 further comprising communicating the bookmark media objects to a client device for display to a user.
22. A computer-readable medium having instructions stored thereon to cause a programmable processor to:
  - store on a client device a set of references to destinations in an external network environment, each destination having an associated bookmark media object located in the external network environment, the associated bookmark media object when presented to a user providing information regarding a state of the destination;
  - present the bookmark media objects to a user for selection; and
  - access the network destination corresponding to the selected bookmark media object.
23. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to store on the client device a set of references to the bookmark media objects.
24. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to retrieve a web page corresponding to the selected bookmark media object.

25. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to retrieve a three-dimensional environment corresponding to the selected bookmark media object.

26. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to present the bookmark media objects by displaying at least one thumbnail.

27. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to present the bookmark media object by displaying a stream of video.

28. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to output audible sounds in response to at least one audio signal.

29. The computer-readable medium of claim 22, wherein the instructions cause the programmable processor to determine a status of each bookmark media object; and present a default bookmark media object when the status indicates the corresponding bookmark media object is not available.

30. The computer-readable medium of claim 22, wherein each bookmark media object represents a current state of the corresponding network destination.

31. A system comprising:

- a server configured to store a set of bookmark media objects, wherein each bookmark media object when presented to a user provides information regarding a state of a corresponding destination within a network environment;

- a client device communicatively coupled to the server and configured to store references to the network destinations; and

- a web browser executing in an operating environment provided by the client device, wherein the web browser is configured to present the bookmark media objects to a user for selection as a function of the references and to access the network destination corresponding to the selected bookmark media object.

32. The system of claim 31, wherein at least one of the bookmark media objects comprises a thumbnail.

33. The system of claim 31, wherein at least one of the bookmark media objects comprises an audio stream.

34. The system of claim 31, wherein at least one of the bookmark media objects comprises a video stream.

35. The system of claim 31, wherein a client device configured to store references to the bookmark media objects on the web server.

36. The system of claim 31, wherein the web server is configured to update each bookmark media object as a function of a current state of the corresponding network destination.

37. The system of claim 36, wherein the web server is configured to update each bookmark media object as a function of information received from the web browser.

38. The system of claim 36, wherein the web server is configured to update each bookmark media object when content of the network destination is changed.

39. The method of claim 1, wherein the bookmark media object when presented to a user provides a multimedia preview of the corresponding destination.

40. A computer program product, tangibly stored on a computer readable medium, comprising instructions operable to cause a programmable processor to:

generate a set of bookmark media objects, each bookmark media object corresponding to a network destination within a computing environment;

store the bookmark media objects on one or more servers within the computing environment; and

update each bookmark media object as a function of a state of the corresponding network destination.

41. The product of claim 40, wherein instructions to update each bookmark media object comprise instructions to update each bookmark media object as a function of a current state of the corresponding network destination.

42. The product of claim 40, wherein the set of bookmark media objects is generated by a server within the computing environment, and further wherein instructions to update each bookmark media object comprise instructions to update each bookmark media object as a function of host-determined conditions.

43. The product of claim 40, wherein instructions to update each bookmark media object comprise instructions to update each bookmark media object when content of the corresponding network destination is changed.

44. The product of claim 40, wherein instructions to generate a set of bookmark media objects comprise instructions to generate a thumbnail for a first bookmark media object in the set.

45. The product of claim 40, wherein instructions to generate a set of bookmark media objects comprise instructions to generate a video stream for a first bookmark media object in the set.

46. The product of claim 40, wherein instructions to generate a set of bookmark media objects comprise instructions to generate an audio stream for a first bookmark media object in the set.